ModeEdit

1 About

This documentation is made for helping you configurate your monitor and your screen modes in ModeEdit. Many configuration options are not easy to understand, this will explain what these options do and how they effect you and your settings, but not much about why.

2 Configuration

There are three different pages in ModeEdit - Modes, Monitor and Gamma. When this documentation was made the Gamma page didn't work.

If your monitor isn't configured you MUST start with the Monitor page. After your monitor is correctly configured you can go on and configure your screen modes.

 1) Config your monitor, section 2.1 below.

 2) Config your screen modes, section 2.2 on next page.

2.1 Edit you monitor settings

To configure your monitor settings first switch to the Monitor page. This is where all information about your monitor is located. There are some different ways to edit your monitor settings, of course you can use whichever you want. The Default list can be found in ModeEdit in the Monitor page.

 • If your monitor model exists in the Defaults list go to section 2.1.1
 • If it not exist in the Default list go to section 2.1.2
 • If you want to import settings from a Pegasos or an Amiga go to section 2.1.3

IMPORTANT
Always press Apply after changing anything in this tab. Othervise the settings will NOT be saved and your changes will be lost, even if you press the save button. The Apply button will temporary activate your settings so you can use them, but it won't save anything.

2.1.1 Edit with a default mode

If your monitor is on the Defaults list simply select it and you will see the values change. But it might be good to verify the values with your manual before you continue. And don't forget to press Apply.

After that you are ready for the next step, to edit your screens modes. Go to section 2.2.

2.1.2 Edit with the manual or similar

For this you need some information about your monitor, so try to find your monitor manual. If you don't have the manual, the information can maybe be found on your vendors homepage for example.

When you have the information about your monitor, you just need to enter the values in the fields - name, bandwidth etc. A wrong frequency value can damage the monitor. Most modern monitors has protection against that, but don't count on it. The Synchronization Min time and Min Pulse usually works with the values already entered, but if you find it in the manual specify that instead.

And don't forget the Apply button.

After that, you are ready for the next step, to edit your screens modes. Go to section 2.2.

2.1.3 Import a config file from another computer

It is also possible to use an old configuration made in CGXMode on an other computer, for example on an Amiga. It's made by first save the configuration to a file on the computer where the settings was made, and then copy that file to this computer. Then in ModeEdit's menu select 'Active Class -> Open...', select the configuration file you made and the settings will be loaded.

After that you are ready for the next step, to edit your screens modes. Go to section 2.2.

2.2 Edit the modes

If it's the first time you run this program, you will see a list of some default screen modes. There are some 8 Bit modes, some 15/16 Bit modes and some 24 Bit modes. The more Bits, the higher amount of available colors. Usually 24 Bit is recommended because it will look best, thus it require more memory.

If you mark a screen mode and press edit a, new window will appear where all settings for that screen mode is set. At the top of that window you see a list of some resolutions. Some of the resolutions on the list are followed by VESA (Video Electronics Standards Association), which is a standard for resolutions and should work with the most graphic cards and monitors. Try to use them first, they mostly give a good picture immediately or with just a fine tuning. For the most monitors the supported VESA screen modes can be found in the manual.

No resolutions or very few resolutions on the list?
If there are very few resolutions available the problem probably has something to do with the frequency in the Monitor tab. Have a look at it and see if they are correct, also check you have pressed the Apply button.

Here comes description of the options available.

VESA (Video Electronics Standards Association)
A standard for different electronic equipment, example for resolutions. This makes it easier for the customer. If a monitor producer supports a VESA mode then it's just for the customer to select that mode and he/she will get a good display with less configuration.

Hidden
Hide this screen mode for other programs. You can make a few test screen modes but maybe you don't want to have them in the screen mode list for other programs.

Type
Select screen depth -
8 Bit (256 colors), 15/16 Bit (65,536 colors) or 24 Bit (16.777.216 colors)

Scan mode
Normal
Every scanline is displayed, one after another.

Interlace
Interlace is a trick to make higher resolutions possible. One screen update then needs to be "written" by the monitor two times, one time to displays all the odd lines (1-3-5-7-etc) and one time to displays all the even lines (2-4-6-8-etc). This will lower the vertical frequency with about half.

Interlacing can make the screen flicker, but it might be the only way to display the screen mode. So, if you have problems getting the high resolution you want, you can try to activate interlace.

Double scan
For modes with very low vertical resolution (like 320x200 or 640x200), double scan is needed for the mode to be displayed. Each pixel line will be drawn two times. It will draw line 1 then line 1 again, line 2 and line 2 again, line 3 and... making the horizontal frequency about twice as high as it otherwise would be. If a mode has a horizontal frequency of 35 kHz in normal scan it will be 70 kHz in double scan mode.

Pixel clock
Specifies the rate at which pixels are generated, in pixels per second. The higher pixel clock the higher resolution is possible. The value entered here is limited by the graphics card and the selected mode. For most graphics cards the maximum bandwidth varies depending on the depth.

If you use a too high pixel clock, the pixels will not be sharp and can start to blur or you will not get a display at all. This shouldn't damage any hardware.

Resolution
The width of the screen in dots.

Sync length
This is the total time the monitor needs to move the beam from the end of one line to the beginning of next. It's used to change the size of the viewable area. A smaller value will increase the horizontal/vertical size of the display and the opposite will decrease it. This because a smaller value will make the borders smaller and therefore leave more space for the viewable area, and vice versa.

Pulse offset
This can be used to center the screen. When you change the pulse offset you are moving the horizontal/vertically starting position of the border. Increasing the Pulse Offset will move the screen to the left/up and decreasing moves it to the right/down.

Pulse Length
This is the length of the pulse that tells the monitor to change to next line, the length differs from monitor to monitor. You can't really modify anything with this one, it just need to be over the minimum value that the monitor can handle. To change this isn't a good way if you just want to edit your screen mode.

Polarity
Specifies the polarity of the sync pulse - negative or positive.

Frequency
The output frequency, depends on your settings.

Pressing the test button will show the screen mode you have specified. In the test screen it is possible to change the screen mode in real time.

If you don't got any picture when you press test, it's just a black screen, press Esc to close that screen and return to Ambient.

Now it's just to create all screen modes you need and then select them in your other programs. You can for example select your Ambient screen mode in the Screenmode part of the Main Preferences window.

Don't forget to save your settings by pressing the Save button. A reboot is also needed to make the new screen modes available in the system.